

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-9 are pending in this application. No claims are amended, canceled, or added by the present amendment.

In the outstanding Office Action, Claims 1, 2, 5, 6, and 9 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 5,812,545 to Liebowitz et al. (herein “Liebowitz”) in view of U.S. Patent 6,839,332 to Agarwal et al. (herein “Agarwal”); and Claims 3, 4, 7, and 8 are indicated on the Office Action Summary as merely being objected to, and are not otherwise rejected. Thus, it is presumed that Claims 3, 4, 7, and 8 include allowable subject matter.

Initially, Applicants and Applicants’ representative gratefully acknowledge the courtesy of a personal interview with Examiner Kang and Supervisory Patent Examiner Nguyen on October 10, 2007. During the interview, differences between the pending independent claims and references in the Office Action were discussed, and it was agreed that the references in the Office Action fail to teach or suggest each of the features of the independent claims. Comments discussed during the interview are reiterated below.

Applicants respectfully traverse the rejection of Claims 1, 2, 5, 6, and 9 under 35 U.S.C. § 103(a) as unpatentable over Liebowitz and Agarwal.

Claim 1 is directed to a control method for a synchronous communication network that includes a hub and a plurality of user nodes each at a different distance from the hub. The method includes, in part, creating a burst time plan that allocates a number of slots and a location of each slot in a frame time period to each user node. In addition, the control method includes transmitting a respective data burst in the frame time period from each user node to the hub according to the burst time plan, where the position of each slot in the frame time

period allocated to the respective user node is equally spaced along a time axis. Independent Claims 5 and 9 include similar features directed to a synchronous communication system.

In a non-limiting embodiment, Applicants' Figures 15-17 show an example of feathering time slots so that the position of each slot in a frame time period is allocated to a respective user node is equally spaced along a time axis of the frame time period. In this example, the feathering process adds up a total number of slots available for a given virtual frame 1502 (e.g., frame time period). Then, target slot assignments 1503 and slot assignments per node 1500 are calculated for every node so that they may be equally spaced throughout the virtual frame. The resulting allocation of time slots to user nodes shown in 1504 advantageously allocates the position of each slot in the frame time period allocated to the respective user node to be equally spaced along the time axis of the frame time period.

As discussed during the interview, Liebowitz and Agarwal, whether taken individually or in combination, fail to teach or suggest each of the features of the independent claims. For example, as discussed during the interview, Liebowitz and Agarwal fail to teach or suggest that a position of each slot in the frame time period allocated to a respective user node is equally spaced along a time axis. In addition, Applicants respectfully traverse the assertion in the Office Action that Liebowitz discloses that the position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis at column 11, lines 1-24, and column 12, lines 7-23.<sup>1</sup>

Liebowitz describes a full mesh satellite-based multimedia network system that provides connectivity between a number of earth terminals (e.g., a plurality of user nodes) via a satellite link.<sup>2</sup> Further, according to Liebowitz, the terminals may transmit data in at least one of a plurality of slots that make up a time frame in a time division multiplex access

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<sup>1</sup> Office Action at page 4, first paragraph.

<sup>2</sup> Liebowitz at Abstract.

(TDMA) time frame in accordance with a burst time plan.<sup>3</sup> Further, Liebowitz indicates that a TDMA frame 96 (e.g., a frame time period) includes a fixed assignment subframe 100 and a larger dynamic assignment subframe 102.<sup>4</sup> Liebowitz indicates that slots 99 in the fixed assignment subframe 100 are dedicated to respective terminals 12, that is, terminal 12 is assigned particular same time slots 99 in each frame 96 during which it transmits signals to a satellite.<sup>5</sup> On the other hand, Liebowitz indicates that a bandwidth reservation process determines how the slots 99 in the dynamic assignment subframe 102 are allocated among requesting terminals 12.<sup>6</sup> Further, Liebowitz indicates that the burst plan may be used to dynamically assign the time slots in the dynamic assignment subframe 102 and indicates that the burst plan is dynamic so that a particular terminal may request more slots 99 during which to transmit bursts of data if more bandwidth is required.<sup>7</sup>

In other words, Liebowitz indicates that a burst time plan may be used to dynamically assign time slots in a dynamic assignment subframe 102, and Liebowitz further indicates that slots may be dedicated to terminals in a fixed assignment subframe 100, where the dynamic assignment subframe 102 and the fixed assignment subframe 100 are found in each TDMA time frame (e.g., in each frame time period).

However, Liebowitz is silent regarding any suggestion or need to spread the time slots allocated to particular user nodes in the frame time period such that they are equally spaced along a time axis. Liebowitz merely indicates that time slots may be assigned, but is silent regarding any particular organization or arrangement of the time slots assigned to particular terminals. Thus, it is respectfully submitted that Liebowitz fails to teach or suggest that “the

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<sup>3</sup> Liebowitz at column 2, lines 47-51.

<sup>4</sup> Liebowitz at column 9, lines 35-37, and Figure 6.

<sup>5</sup> Liebowitz at column 9, lines 36-44.

<sup>6</sup> Liebowitz at column 11, lines 35-37.

<sup>7</sup> Liebowitz at column 11, lines 18-34.

position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis,” as recited in the independent claims.

Further, because Liebowitz indicates that a TDMA frame (e.g., frame time period) is comprised of a dynamic assignment subframe 102 having dynamically assignable time slots and a fixed assignment subframe 100 having dedicated time slots, Liebowitz actually teaches away from any ability to equally space along a time axis time slots that are allocated to respective user nodes in the frame time period. That is, because a portion of each frame time period of Liebowitz is dedicated to particular terminals, it would not be possible to equally space along the time axis of the frame time period the position of slots allocated to respective user nodes in the frame time period.

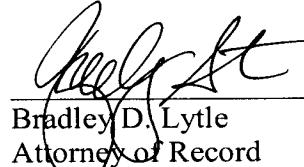
Further, it is respectfully submitted that Agarwal, which was applied in the Office Action merely to disclose a communication system that includes a hub, also fails to teach or suggest the claimed features lacking in the disclosure of Liebowitz. Accordingly, it is respectfully submitted that Liebowitz and Agarwal, whether taken individually or in combination, fail to teach or suggest “the position of each slot in the frame time period allocated to the respective user node is equally spaced along a time axis,” as recited in the independent claims.

Accordingly, it is respectfully submitted that independent Claims 1, 5, and 9, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment this application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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